

Amendments to the Specification:

Please amend the specification as follows:

Replace paragraph [001] at page 1, with the following rewritten paragraph:

--The application is a continuation-in-part and claims the benefit of U.S. Application No. 10/251,364, filed September 18, 2002, now issued US Patent No. 7,312,374, issued December 25, 2007, which claims the benefit of U.S. Provisional Application No. 60/322,969, filed September 18, 2001, and U.S. Provisional Application No. 60/351,550, filed January 25, 2002, all of which are incorporated by reference herein in their entireties.--

Replace paragraph [002] at page 24, with the following rewritten paragraph:

--Any suitable microinjection assembly and methods for microinjecting and reimplanting avian eggs are contemplated as useful in the method of cytoplasmic injection of the present invention. A particularly suitable apparatus and method for use in the present invention is fully described in U.S. Patent Application No: 09/919,143 by Christmann, now abandoned, and PCT Publication WO 02/064727, incorporated herein by reference in their entireties. The microscope/micromanipulation unit may be an IM-16 microinjector and a MM-188NE micromanipulator, both from NIKON®/NARISHIGE, adapted to an upright Nikon Eclipse E800 microscope adapted to operate under both transmitted and reflected light conditions. This unique configuration allows the loading of a DNA solution into a micropipette while observing the pipette with a dry or water immersion lenses under diascopic illumination or transmitted light. Pipette loading is followed by the prompt localization and positioning of the germinal disk under the microscope and subsequent guided injection of DNA solution into the germinal disk using dry or water-immersion lenses under fiber optic, as well as episcopic, illumination (through the objectives and onto the embryo surface).--

Replace paragraph [0100] at page 51, with the following rewritten paragraph:

--The promoter may optionally be a segment of the *ovalbumin* promoter region that is sufficiently large to direct expression of the coding sequence in the tubular gland cells. Other exemplary promoters include the promoter regions of the *ovalbumin*, *lysozyme*, *ovomucoid*, *ovotransferrin* or *ovomucin* genes (for example, but not limited to, as disclosed in co-pending United States Patent Application Nos. 09/922,549, filed August 3, 2001, now issued US Patent No. 7,176,300, issued February 13, 2007, and 10/114,739, filed April 1, 2002, now issued US Patent No. 7,199,279, issued April 3, 2007, ~~both entitled "Avian Lysozyme Promoter"~~, by Rapp, and United States Patent Application No. 09/998,716, filed November 30, 2001, now issued US Patent No. 6,875,588, issued April 5, 2005, and PCT Publication No. WO 03/048364, both entitled "Ovomucoid Promoter and Methods of Use," by Harvey *et al.*, all of which are incorporated by reference herein in their entireties). Alternatively, the promoter may be a promoter that is largely, but not entirely, specific to the magnum, such as the *lysozyme* promoter. Other suitable promoters may be artificial constructs such as a combination of nucleic acid regions derived from at least two avian gene promoters. One such embodiment of the present invention is the MDOT construct (SEQ ID NO: 11) comprising regions derived from the chicken ovomucin and ovotransferrin promoters, including but not limited to promoters altered, *e.g.*, to increase expression, and inducible promoters, *e.g.*, the tet^r system.--

Replace paragraph [0110] at page 54, with the following rewritten paragraph:

--One example of an ovomucoid promoter region is described in U.S. Patent Application Publication No. 2003/0126628, published July 3, 2003, now issued US Patent No. 6,875,588, issued April 5, 2005, by Harvey *et al.*, which is incorporated herein by reference in its entirety. An approximately 10 kb region of the chicken genome lying between the 3' end of the ovoinhibitor gene and the 5' transcription start site of the ovomucoid gene was obtained by PCR amplification. The obtained sequence includes the ovoinhibitor gene 3' untranslated region (Scott *et al.*, 1987, J. Biol. Chem. 262: 5899 -5909), a CR1-like element (Scott *et al.*, 1987,

Biochemistry 26: 6831-6840; Genbank Accession No: M17966), and a portion of the 5' untranslated region of the ovomucoid gene (Genbank Accession No: J00897; *Lai et al.*, 1979, Cell 18:829-842.--

Replace paragraph [0251] at page 92, with the following rewritten paragraph:

--WEFs were transfected either with the heavy and light immunoglobulin polypeptides encoded by separate plasmids (p1083 and p1086 respectively) each under the control of the CMV promoter or encoded on the same reactor under the transcriptional control of a CMV promoter and including an IRES translational element as described in U.S. Patent Application No. ~~09/977,374, filed 08 June 2001~~ 09/877,374, filed 08 June 2002 and incorporated herein by reference in its entirety. The supernatants were analyzed for antibody content by ELISA and FACs.--

Replace paragraph [0272] at page 95, with the following rewritten paragraph:

--(ii) *Injection*. Between about 1-100 nanoliters of DNA solution was injected into a germinal disk using a glass pipette after removal of the capsule. The microinjection assembly and methods for microinjecting and reimplanting avian eggs are fully described in U.S. Patent Application No. 09/919,143, filed 31 July 2001, now abandoned--

Replace paragraph [0286] at page 99, with the following rewritten paragraph:

--The chicken lysozyme gene expression control region isolated by PCR amplification is fully disclosed in U.S. Patent Application No. 09/922,549, filed 03 August 2001, now issued US Patent No. 7,176,300, issued February 13, 2007, and incorporated herein by reference in its entirety. Ligation and reamplification of the fragments thereby obtained yielded a functionally

contiguous nucleic acid construct comprising the chicken lysozyme gene expression control region operably linked to a nucleic acid sequence encoding a human interferon $\alpha 2b$ polypeptide and optimized for codon usage in the chicken. Briefly, chicken (*Gallus gallus* (White Leghorn)) genomic DNA was PCR amplified using the primers 5pLMAR2 and LE-6.1kbrev1 in a first reaction, and Lys-6.1 and LysE1rev as primers in a second reaction. PCR cycling steps were: denaturation at 94°C for 1 minute; annealing at 60°C for 1 minute; extension at 72°C for 6 minutes, for 30 cycles using TAQ PLUS PRECISION™ DNA polymerase (STRATAGENE®, LaJolla, CA). The PCR products from these two reactions were gel purified, and then united in a third PCR reaction using only 5pLMAR2 and LysE1rev as primers and a 10 minute extension period. The resulting DNA product was phosphorylated, gel-purified, and cloned into the *EcoR* V restriction site of the vector PBLUESCRIPT® KS, resulting in the plasmid p12.0-lys.--

Replace paragraph [0289] at page 100, with the following rewritten paragraph:

--The complete sequences of the lysozyme gene promoter and the codon-optimized human interferon $\alpha 2b$ nucleic acid are fully disclosed in U.S. Patent Application No. 09/922,549, filed 03 August 2001, now issued US Patent No. 7,176,300, issued February 13, 2007, and incorporated herein by reference in its entirety. The complete nucleotide sequence of the approximately 12.5 kb chicken lysozyme promoter region/IFNMAGMAX construct spans the 5' matrix attachment region (5' MAR), through the lysozyme signal peptide, to the sequence encoding the gene IFNMAGMAX and the subsequent polyadenylation signal sequence. The IFNMAGMAX nucleic acid sequence had been synthesized as described in Example 17 above. The expressed IFN $\alpha 2b$ sequence within plasmid pAVIJCR-A115.93.1.2 functioned as a reporter gene for lysozyme promoter activity. This plasmid construct may also be used for production of interferon $\alpha 2b$ in the egg white of transgenic chickens.--